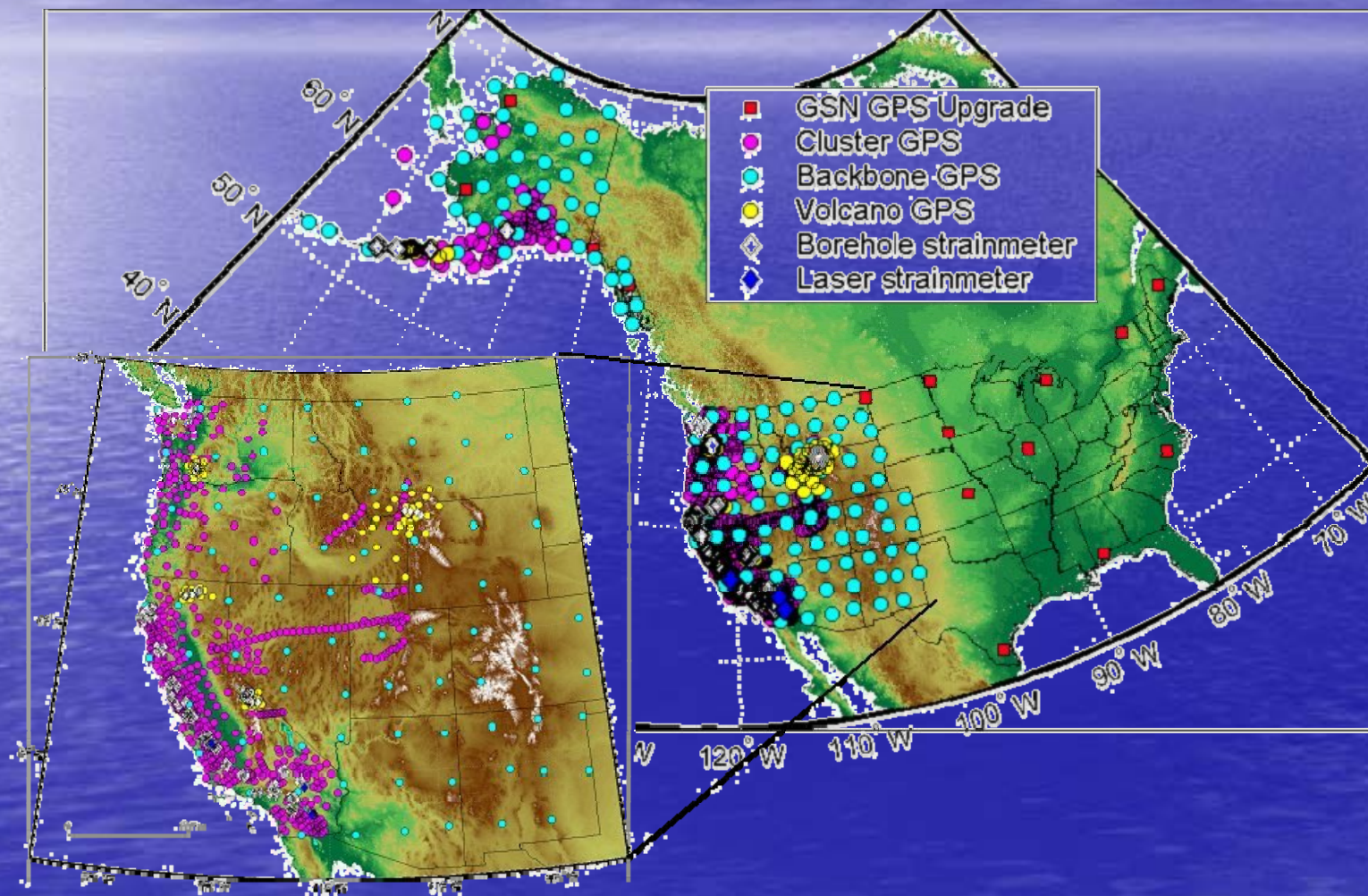


2004: Plate Boundary Observatory



SAN DIEGO COUNTY REAL TIME NETWORK SDCRTN



Components of a Real-Time Network



Geodetic-Grade GPS Receivers



Bluetooth Serial



Comm.

Internet

RTCM, CMR+

Server

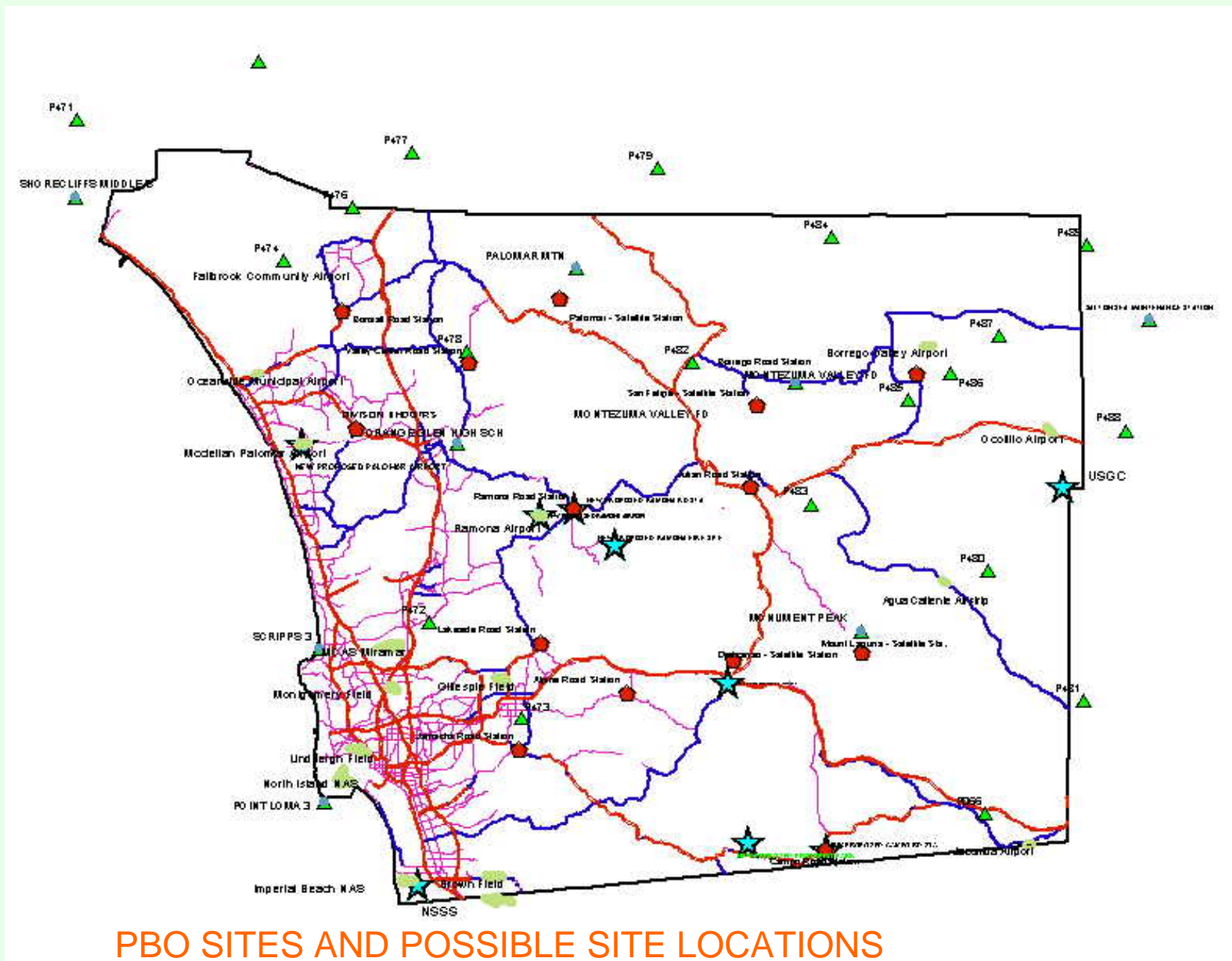


RAVEN MODEM



THE PLAN

- PLOTTED PBO SITES IN GIS
- USED GIS TO FIND COUNTY PROPERTY
- REVIEWED GIS ORTHO PHOTOS FOR POTENTIAL SITES
- REVIEW POTENTIAL LOCATIONS WITH PBO
- PBO DID SITE REVIEWS FOR SOIL STABILITY
- CONTACTED OTHER COUNTY DEPARTMENTS AND DPW SECTIONS FOR APPROVALS



PBO SITES AND POSSIBLE SITE LOCATIONS

USED GIS TO PLOT AIRPORTS, FIRE STATIONS AND OTHER COUNTY PROPERTY



**BORREGO SPRINGS AIRPORT OTHO PHOTOS
USED TO PICK SPOTS TO INVESTIGATE**

THE PLAN

- APPLY TO ENVIRONMENT FOR A NOTICE OF EXEMPTION FROM CEQA GUIDELINES.
- SITE VISITS BY ENVIRONMENTAL AND MITIGATION.
- SITE PICTURES AND SKY SURVEYS FOR EACH SITE



DESCANSO DETENTION FACILITY

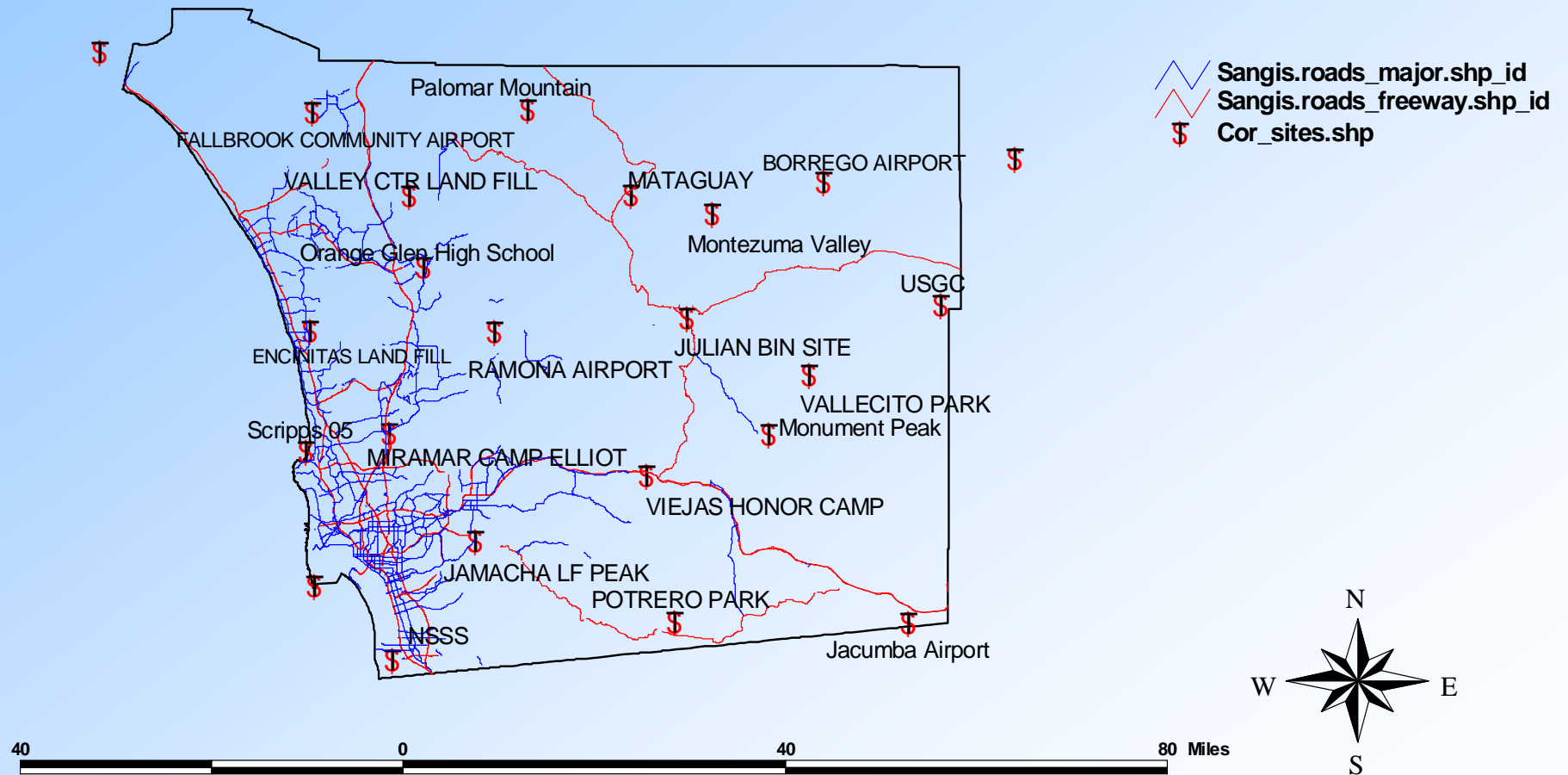


**FALLBROOK COMMUNITY
AIRPARK**

THE PLAN

- OBTAIN APPROVALS FOR VARIOUS SITES
 1. VULCAN MOUNTAIN AREA SITE, JULIAN ROAD STA.
 2. JULIAN BIN SITE.
 3. RAMONA AIRPORT, RAMONA ROAD STATION,
 4. JACUMBA LIBRARY, JACUMBA AIRPORT.
 5. VALLEY CENTER ROAD STA. VALLEY CENTER LAND FILL
- CONTACTED OWNERS.
- COOPERATION FROM VARIOUS DPW SECTIONS, THE SHERIFF AND PARKS AND RECREATION.
 1. VISTA IRRIGATION COOPERATED WITH THE SITE AT MATAGUA, LAKE HENSHAW AREA.

SAN DIEGO COUNTY REAL TIME NETWORK



PBO, SCIGN AND COUNTY SITES

THE PLAN

- NO PERMITS REQUIRED FROM PLANNING AND LAND USE.
- RIGHT OF ENTRY AGREEMENTS WITH VISTA IRRIGATION DISTRICT, DPW INACTIVE WASTE, DPW AIRPORTS, COUNTY PARKS AND RECREATION AND THE SHERIFF'S DEPARTMENT.
- OBTAINED SIGNATURES AND WE WERE READY FOR CONSTRUCTION

THE PLAN

- PBO GOT STARTED RIGHT AWAY WITH THE FIRST STATION BUILT AT FALLBROOK AIRPARK
- ASSISTED THEM WITH INSTALLTIONS AND TO LEARN HOW THE STATIONS ARE BUILT.
- THE COUNTY'S FIRST STATION WAS BUILT AT RAMONA AIRPORT.
- BIDS FOR THE CONSTRUCTION OF THE REMAINING 3 COUNTY STATIONS.

First 20 Hz Real Time Station in SDCRTN



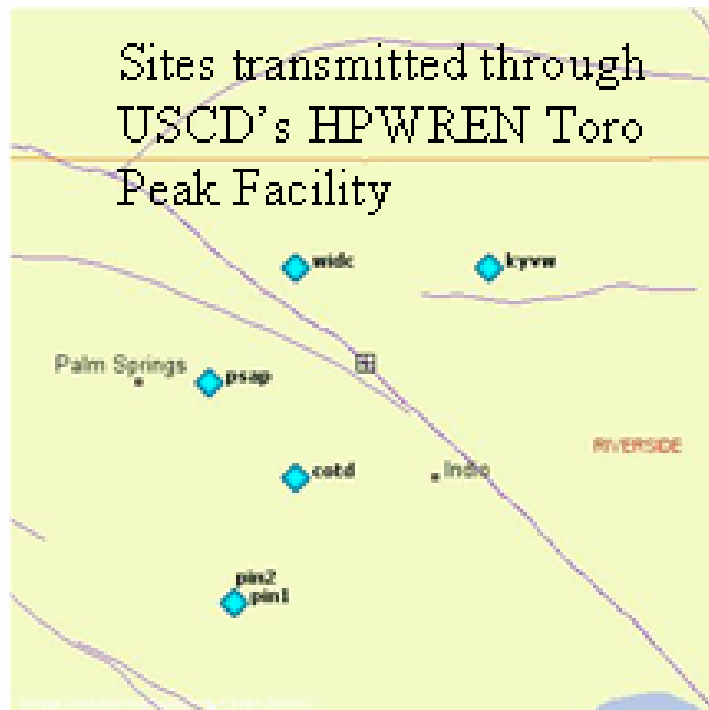
Ramona Airport



THE PLAN

- COMMUNICATIONS
- FIRST STATIONS TO BECOME REAL TIME WERE THE STATIONS USING THE UNIVERSITIES HPWREN HIGH PERFORMANCE WIRELESS RESEARCH AND EDUCATION NETWORK
- SHERIFF WANTED A TEST SIGNAL THROUGH THE RCS TO REVIEW FOR ANY ISSUES.
- CONTRACT FOR CLIMBERS FOR THE COUNTY TOWERS
- SHEIRFF PROVIDED SPACE IN THEIR COMMUNICATION BUILDING FOR OUR SERVER
- THE HPWREN DATA STREAMS AND SHERIFFS DATA STREAMS ARE COMBINED TO SEND TO SCRIPPS AND TO THE COUNTY SERVER.

Riverside & San Diego County Upgrades



HPWREN Antenna at Mt. Palomar



New Panel Antenna
To P483 @ 276°
(Julian Bin Site)

banner



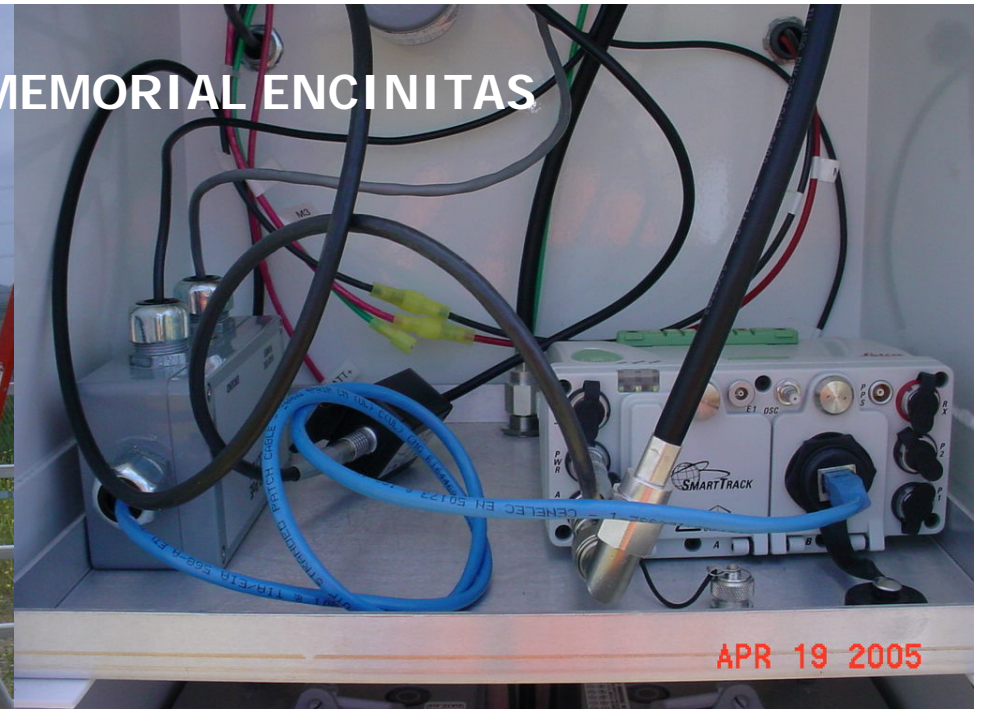
New 2-foot Dish
To NSSS @ 235°



WIRELESS COMMUNICATION TOWERS



DANA SEGUIN MEMORIAL ENCINITAS
DSME



OK, WHAT'S NEXT

- HOW DO WE GET THE DATA FOR OUR RTK SURVEYS
- COUNTY USES LEICA SYSTEM 500 RECEIVERS AND RAVEN MODEMS
- SET UP IP AND PORT ASSIGNMENTS FOR ALL THE STATIONS
- DIAL IN THROUGH THE MODEM TO PRESET UP STATIONS AND START RECEIVING RAW DATA FEEDS.
- SOME OLDER INSTRUMENTS CANNOT USE DATA FROM A MODEM, CHECK WITH YOUR MANUFACTURER.
- COUNTY OF SAN DIEGO IS BROADCASTING CALCULATED 1991.35 HPGN POSITIONS FOR THE NETWORK
- SCRIPPS IS BROADCASTING 2004 EPOCH FOR ALL THE STATIONS

Code	Name	Type	Status	RX Type	Comm Type	Prior Lat	Prior Long	Prior Height	Coords	Tropo
RAAP	Ramona Airport	REF	4/6 15:43:32	LEICA GRX1200PRO	TCP/IP	N 33° 2' 32.018"	W 116° 55' 2.028"	+395.7720	Fix	Adjust
OGHS	Orange Glen High School	ADV	4/6 15:43:31	Ashtech Z Series	TCP/IP	N 33° 7' 50.156"	W 117° 2' 30.301"	+185.9890	Adjust	Adjust
PMOB	Palomar Observatory	ADV	4/6 15:43:32	Ashtech Z Series	TCP/IP	N 33° 21' 26.032"	W 116° 51' 34.303"	+1663.2600	Adjust	Adjust
SIO5	Scripps 5 - Mt. Soledad	ADV	4/6 15:43:31	Ashtech Z Series	TCP/IP	N 32° 50' 26.615"	W 117° 14' 58.815"	+186.3084	Adjust	Adjust
DSME	Dana Seguin Memorial Encinitas	ADV	4/6 15:43:32	LEICA GRX1200PRO	TCP/IP	N 33° 2' 11.289"	W 117° 14' 58.262"	+56.8770	Adjust	Adjust
P472	CampElliot_CS2004	ADV	4/6 15:43:32	TRIMBLE NETRS	TCP/IP	N 32° 53' 21.121"	W 117° 6' 16.836"	+138.6020	Adjust	Adjust
P480	Vallecito_CS2004	ADV	4/6 15:43:31	TRIMBLE NETRS	TCP/IP	N 32° 58' 33.554"	W 116° 20' 54.660"	+436.7900	Adjust	Adjust
MONP	Monument Peak	ADV	4/6 15:43:31	Ashtech Z Series	TCP/IP	N 32° 53' 30.955"	W 116° 25' 20.393"	+1843.3200	Adjust	Adjust
MVFD	Montezuma Valley Fire Dept.	ADV	4/6 15:43:32	Ashtech Z Series	TCP/IP	N 33° 12' 39.112"	W 116° 31' 31.065"	+1190.8430	Adjust	Adjust
P486	BorregoAirCS2004	ADV	4/6 15:43:31	TRIMBLE NETRS	TCP/IP	N 33° 15' 36.660"	W 116° 19' 20.166"	+127.0500	Adjust	Adjust
P482	LakHenshawCS2004	ADV	4/6 15:43:31	TRIMBLE NETRS	TCP/IP	N 33° 14' 24.614"	W 116° 40' 17.020"	+879.4530	Adjust	Adjust
POTR	Potero Park	ADV	4/6 15:43:32	LEICA GRX1200PRO	TCP/IP	N 32° 37' 6.264"	W 116° 35' 27.053"	+731.0922	Adjust	Adjust
P066	JacumbaAP_CS2004	ADV	4/6 15:43:32	TRIMBLE NETRS	TCP/IP	N 32° 36' 59.459"	W 116° 10' 11.167"	+823.6690	Adjust	Adjust
P483	Julian Bin Site	ADV	4/6 15:43:32	TRIMBLE NETRS	TCP/IP	N 33° 3' 32.959"	W 116° 34' 9.504"	+1376.3080	Adjust	Adjust
P474	Fallbrook_CS2004	ADV	4/6 15:43:32	TRIMBLE NETRS	TCP/IP	N 33° 21' 18.662"	W 117° 14' 55.225"	+183.6460	Adjust	Adjust
P478	Valley Center Landfill CS2004	ADV	4/6 15:43:31	TRIMBLE NETRS	TCP/IP	N 33° 14' 8.541"	W 117° 4' 17.658"	+372.3170	Adjust	Adjust
P473	Jamacha_LFCS2004	ADV	4/6 15:43:32	TRIMBLE NETRS	TCP/IP	N 32° 44' 1.562"	W 116° 56' 58.189"	+189.3320	Adjust	Adjust
DESC	Decanso Honor Camp	ADV	4/6 15:43:32	LEICA GRX1200PRO	TCP/IP	N 32° 49' 47.678"	W 116° 38' 30.407"	+958.0702	Adjust	Adjust
NSSS	Chula Vista	ADV	4/6 15:43:32	Ashtech Z Series	TCP/IP	N 32° 34' 45.504"	W 116° 58' 21.591"	+124.3850	Adjust	Adjust
USGC	Ocotillo Wells	ADV	4/6 15:43:32	TRIMBLE NETRS	TCP/IP	N 33° 1' 48.202"	W 116° 5' 7.141"	+134.2050	Adjust	Adjust

PRN Track (Sites 1 - 6)

Map View

All NEU

All Tropo

PRN Track

Alarms

Next Page

Statistics

RAAP

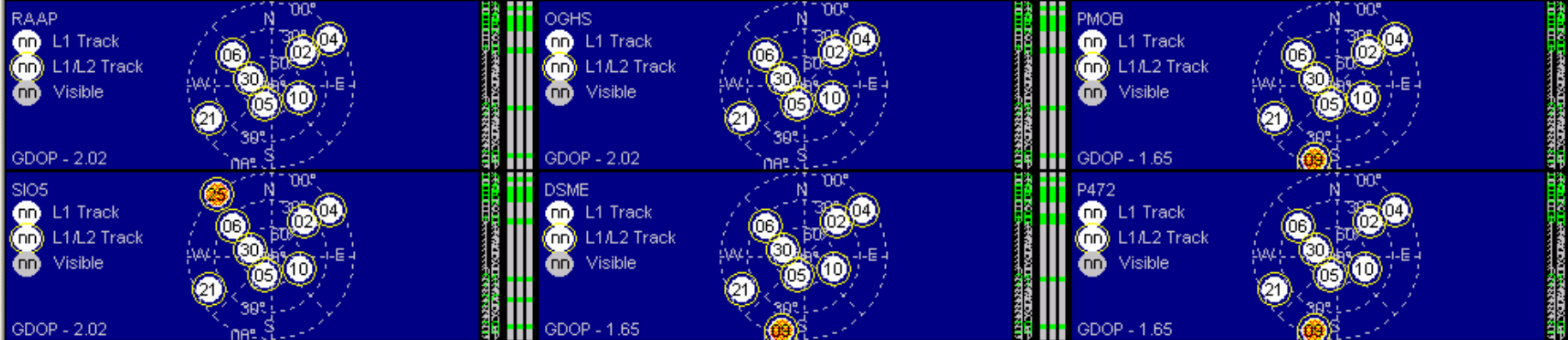
OGHS

PMOB

SIO5

DSME

P472



For Help, press F1

Processed 2006/04/06 15:43:31

2006/04/06 15:43:03 GMT (1369 402183)

QUESTIONS?



FALLBROOK AIRPARK



FALLBROOK AIRPARK

27 9:14AM



FALLBROOK AIRPARK

27 9:14AM



FALLBROOK AIRPARK



FALLBROOK AIRPARK



JULIAN BIN SITE



JULIAN BIN SITE



JULIAN BIN SITE



JUL 28 2004

JULIAN BIN SITE



JULIAN BIN SITE



JULIAN BIN SITE

JUL 28 2004



RAMONA AIRPORT



JACUMBA AIRPORT



JAMACHA LAND FILL



JAMACHA LAND FILL

DEC 21 2004